Copied from PTO/SB/08A and B (08-03)

Examiner

Signature

Copied from PTO/SB/08A (08-03)

Substitute for form 1449/PTO				Complete if k	nown
				Application Number	10/687,012
INFORM	ATION DIS	CLOS	URE	Filing Date	October 16, 2003
STATEMENT BY APPLICANT				First Named Inventor	Romalis
(Use as n	nany sheets as r	ecessar	v)	· Art Unit	2859
•			,	Examiner Name	Arana, L. M.
Sheet	1	of	3	Attorney Docket Number	403-03

		U.	S. PATENT DOCU	MENTS	
Examiner Initials	Cite No.1	Document Number Number-Kind Code ^{2 (7 Arrown)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
L.H.A.		US-4,005,355	01-25-1977	Hopper et al.	
LUA:		US-6,472,869	10-29-2002	Upschulte et al.	
		US-			
		US-			
		US-			
-		US-			
.,		US-			
		US-			
	1	US-			

		FOREIGN DO	CUMENTS			
Examiner Initials	Cite No.1	Foreign Patent Document " Country Code ³ -Number ⁴ -Kind Code ⁵ (Farolum)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	۳
	ļ					
	ļ					
	<u> </u>		<u> </u>	ļ		ļ
		·				
	<u> </u>					<u> </u>
					<u> </u>	ļ
		1				

un

Date

Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of his form with next communication to applicant. 'Applicant's unique citation designation number (optional). 'See Kind Codes of USPTO Patent Documents at www.uspto.gog or MPEP 901.04. 'Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 'For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 'Kind of document by the appropriate symbols as indicated on the document under WIP Standard ST. 16 if possible. 'Applicant is to place a check mark here if English language Translation is attached.'
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

Copied from PTO/SB/08B (08-03)
U. S. Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE

Substitute for form 1449/PTO		Complete if known			
Substitute for for	issuite to form 1448FTO			Application Number	10/687,012
INFORM	ATION DIS	SCLOSU	JRE	Filing Date	October 16, 2003
STATEMENT BY APPLICANT			NT	First Named Inventor	Romalis
(Use as many sheets as necessary))	Art Unit	2859
				Examiner Name	Arana, L. M.
Sheet	2	of	3	Attorney Docket Number	403-03

· ·		NON PATENT LITERATURE DOCUMENTS	
Examiner	Cite	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the	T
Initials	No.	item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		, SQUID Sensors: Fundamentals, Fabrication and Applications, Ed.	
<i>[</i>		Weinstock, H., Kluwer Academic (1996) (Abstract only).	
	•	AFFOLDERBACH, C., et al., An all-optical, high sensitivity magnetic gradiometer, Appl Phys (2002) B 75: 605-612.	
		ALEXANDROV, E.B. et al., Double-Resonance Atomic Magnetometers: from Gas	
		Discharge to Laser Pumping, Laser Phys. (1996) 6: 244-251.	
1		ALEKSANDROV, E.B., et al. Laser pumping in the scheme of an M _x -	
		magnetometer, Optics and Spectr. (1995) 78:292-298.	
	•	ALLRED, J.C., et al., High-sensitivity atomic magnetometer unaffected by spin- exchange relaxation, <i>Phys. Rev. Lett.</i> (2002) 89 :130801-1 – 130801-4.	
		BISON, G., et al., A laser-pumped magnetometer for the mapping of human	
	•	cardiomagnetic fields, Appl. Phys. B. (2003) 76:325-328.	
LHAS		BISON, G., et al., Dynamical mapping of the human cardiomagnetic field with a room-temperature, laser-optical sensor, Opt. Expr. (2003) 11:904-909.	
		BUDKER, D., et al., Resonant nonlinear magneto-optical effects in atoms, Rev.	
		Mod. Phys. (2002) 74:1153-1201.	<u> </u>
		BUDKER, D. et al., Nonliner Magneto-optic Effects with Ultranarrow Widths, <i>Phys. Rev. Lett.</i> (1998) 81 :5788-5791.	
		BUDKER, D., et al., Sensitive magnetometry based on non-linear magneto-optical rotation, <i>Phys. Rev. A</i> (2000) 62 :043403-1 - 043403-7.	
		CLEM, T.R., Superconducting Magnetic Gradiometers For Underwater Target Detection, Nav. Eng. J. (1998) 110:139-149.	
		DEL GRATTA C, et al., Magnetoencephalography - a noninvasive brain imaging method with 1 ms time resolution, Rep. Prog. Phys. (2001) 64:1759-1814.	
		DRUNG, D., et al., Improved direct-coupled dc SQUID read-out electronics with automatic bias voltage tuning, IEEE T. Appl. Supercon. (2001) 11:880-883.	
		GREENBERG, Ya.S., Application of superconducting quantum interference	
		devices to nuclear magnetic resonance, Rev. Mod. Phys. (1998) 70:175-222.	
		HÄMÄLÄINEN M. et al., Magnetoencephalography-theory, instrumentation, and	
		applications to non-invasive studies of the working human brain, Rev. Mod. Phys.	
1 1		(1993) 65:413-497 (Abstract and contents only).	
		HAPPER, W., Optical Pumping, Rev. Mod. Phys. 1972, 44:169-249 (Abstract and gontents only).	
	<u> </u>	1771100000 000111	l

Date Examiner nana Considered Signature

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chlef Information Officer, U. S. Patent and Trademark Office, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

Copied from PTO/SB/08B (08-03)

Substitute for form 1449/PTO				Complete if known		
				Application Number	10/687,012	
INFORM	ATION DIS	CLOS	URE	Filing Date	October 16, 2003	
STATEMENT BY APPLICANT			ANT	First Named Inventor	Romalis	
(Use as n	nany sheets as r	necessar	v)	Art Unit	2859	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			•	Examiner Name	Arana, L. M.	
Sheet	3	of	3	Attorney Docket Number	403-03	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	•	HAPPER, W., et al., Effect of rapid spin exchange on the magnetic-resonance spectrum of alkali vapors, <i>Phys. Rev. A</i> (1977) 16 :1877-1991.	
		HAPPER W. et al., Spin-Exchange Shift and Narrowing of Magnetic Resonane Lines in Optically Pumped Alkali Vapors, Phys. Rev. Lett. (1973) 31:273-276.	
	•	HARRY, G.M., et al., Two-stage superconducting-quantum-interference-device amplifier in a high-Q gravitational wave transducer, <i>Appl. Phys. Lett.</i> (2000) 76 :1446-1448.	
		KELHA, V.O., et al., Design, Construction and Performance of a large-volume magnetic shield, IEEE Trans. Magn. (1982) 18:260-270.	
		KIRSCHVINK, J.L., et al., Paleomagnetic evidence of a low-temperature origin of carbonate in the Martian meteorite ALH84001, Science (1997) 275:1629-1633.	
		KOMINIS, I. K. et al., A subfemtotesla multichannel atomic magnetometer, Nature (2003) 422:596-599.	
LHA.1	•	MCDERMOTT, R., et al., Liquid-state NMR and scalar couplings in microtesla magnetic fields, Science (2002) 295:2247-2249.	
	•	MURTHY, S. A., et al, New Limits on the Electron Electric Dipole Moment from Cesium, Phys. Rev. Lett. (1989) 63:965-968.	
		NENONEN, J., et al., Thermal noise in biomagnetic measurements, Rev. Sci. Instr. (1996) 67:2397-2405.	
·	•	NENONEN, J., et al., Thermal Noise in a Magnetically Shielded Room, in Biomagnetism '87, Ed. K. Atsumi et al., Denki University Press, Tokyo, 1988), p. 426-429.	
	•	OUKHANSKI, N.,et al., Low-drift broadband directly coupled dc SQUID read-out electronics, <i>Physica C</i> (2002) 368 :166-170.	
	•	RODRIGUEZ, E., et al., Perception's shadow: long-distance synchronization of human brain activity, Nature (1999) 397:430-433.	
	•	TRALSHAWALA, N., et al., Practical SQUID instrument for non-destructive testing, Appl. Phys. Lett. (1997) 71:1573-1575.	
		TS'O, D.Y., et al., Functional organisation of primate visual cortex revealed by high-resolution optical imaging, <i>Science</i> (1990) 249 :417-420.	
	•	TSUEI, C.C. et al., Phase-sensitive evidence for d-wave pairing symmetry in electron-doped cuprate superconductors, <i>Phys. Rev. Lett.</i> (2000) 85 :182-185.	
	•	VARPULA, T., et al, <i>J. Appl. Phys.</i> (1984) 55:4015–4021. ZIMMERMAN, J.E., et al., Design and operation of stable RF-biased	
	•	superconducting point-contact quantum devices, and a note on properties of perfectly clean metal contacts. J. Appl. Phys. (1970) 41, 1572-1580.	
Examiner Signature		aus June Date Considered 11/04	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this term with next communication to applicant.

'Applicant's unique citation designation familier (optional). Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.